Subject Index to Volume 12

A

Acceleration, low-frequency, cardiovascular regulation during, H998
Acetylcholine
  cardiac responses, vagal stimulation, H219
  cholera toxin inotropic effect and, ventricular muscle (chick), H434
  relaxant responses and, cerebral arteries, H145
  sodium-potassium exchange effects, smooth muscle, H553
Acidosis
  cardiac cell response, H448
  coronary dilator actions, experimental diabetes (lamb), H252
  electrophysiological changes and, myocardial ischemia (rabbit), H318
Acyl carnitine, utilization, aorta, H128
Acyl carnitine esters, transport, myocardium, diabetes and, H154
Adenosine
  blood flow regulation, coronary, H159
  capillary control, rest and exercise, red muscle, H196
  coronary blood flow and, awake state, H628
  coronary dilator actions of, experimental diabetes (lamb), H252
  degradation, blood, H538
  infusion, reactive and exercise hyperemia during, H181
  myocardial, coronary functional hyperemia and, H480
  tissue, hypoxic coronary dilation, H514
  vasodilation and, coronary, H538
Adenosine monophosphate, cyclic
  arteriolar, spontaneous hypertension, H398
  muscarinic inhibition, ventricular muscle (chick), H434
Adenosine triphosphate, creatine analogue effects, ischemic heart, H911
Adrenal glands, adrenergic mechanisms, gastric distension, H748
Adrenal medulla, cardiac sympathetic innervation and, newborn, H20
β-Adrenergic dilator, skeletal muscle, H819
Adrenergic mechanisms, gastric-cardiovascular reflexes, H748
Adrenergic nerve, norepinephrine metabolism and, H732
α-Adrenergic receptor blockade: *see* Blockade
Adrenergic receptors: *see* Receptors
Adrenergic stimulation, blood flow and, coronary, awake state, H13
Afferent nerves, aortic, baroreflex bradycardia inhibition, H607
Aftercontractions, cardiac Purkinje fibers, H77
Afterload, coronary circulation and, awake state, H94
Aging
  cardiac hypertrophy, tibial length and, H941
  myocadial blood flow, oxygen delivery and (sheep), H729
Albumin, aortic, Evans blue dye uptake and, serum effects, H708
Aldosterone, altered arterial ion transport, hypertension, H927
α-Aminoisobutyric acid, blood-brain transport, histamine effects, H307
Amino-oxyacetate, utilization, aorta, H128
Aminophylline, effects, functional hyperemia, coronary, H480
Anesthesia
  microvascular effects of, decerebration, H837
  response to hemorrhage and, H713
Angina pectoris, training effects, skeletal muscle and heart, H830
Angiopathy, diabetic, experimental juvenile, H139
Angiotensin
  renal blood flow and, H277
  vasodepressor action, awake state (chicken), H456
Angiotensin II
  fatty acid-deficient diet, renal vasoconstriction, H61
  water retention and, systemic hemodynamics, H934
Angiotensin II antagonists, fluid volume and pressor responses, renal artery stenosis, H779
Anoxia
  cardiac cell response, H448
  oxygen consumption rate and, arterial wall, H948
Antidiuretic hormone, infusion, cardiac output during, awake state, H663
Aorta
  endogenous lipid, glycogen and protein utilization, H128
  ligation, renal ischemia and, H869
  ouabain and potassium relaxation, renal hypertension, H896
  uptake, albumin and Evans blue dye, serum effects, H708
  wall, oxygen consumption rate, H948
Aortic nerve, excitatory afferents, baroreflex bradycardia inhibition, H607
Arachidonic acid, deficiency effects, renal vasoconstriction, H61
Arrhythmias
  cardiac, lysophosphatides and, H187
  release, myocardium at risk and, H340
  ventricular, sequentially applied pulses (calf), H982
Arrhythmogenesis, electrophysiological changes and, myocardial ischemia (rabbit), H318
Arterial pressure: *see* Pressure
Arterial wall, oxygen consumption rate of, H948
Arteries: *see* specific artery
Arterioles
  cerebral, increased venous pressure and, H442
  diameter, spontaneous hypertension, H243
  intracerebral, study of, H598
  mesenteric, adenosine monophosphate, cyclic production, hypertension, H398
Aspiration, inflammatory response to, ibuprofen, H903
Atherosclerosis, oxygen consumption rate, arterial wall, H948
ATPase: *see* Sodium-potassium-ATPase
Atria: *see* Heart atria
Atrioventricular conduction, heart rate changes, autonomic activity effects, H525
Atrioventricular node
  conduction, atrial fibrillation, heart, H754
  structure and function of, H41
Automaticity, structure and function of atrioventricular node, H41
Autonomic activity, heart rate changes and, atrioventricular conduction, H525
Autonomic nervous system, vagal stimulation, cardiac responses to, H219
Autoregulation
  blood flow, adenosine infusion, H181
  increased venous pressure, cerebral arteriolar response to, H442
  metabolic, nonischemic myocardial hypoxia, H514
Awake state
  adenosine, coronary blood flow and, H628
  α-adrenergic receptor blockade, coronary circulation and, H94
  cardiac output, vasopressin infusion and dehydration, H663
  coronary blood flow, adrenergic stimulation effects, H13
  heart failure, nitroglycerin effects, model, H974
  microsphere injection, left atrium, H488
  prostacyclin effects, liver vasculature, H584
  vasodepressor action, angiotensin (chicken), H456

B

Baroreceptors: *see* Receptors
Baroreflex: *see* Reflexes
Bicarbonate ion, modulation, blood flow during hypoxia and hypercapnia, H33
Blockade
  adrenergic, hypoxia, hindlimb resistance in, H1010
  α-adrenergic receptor, coronary circulation and, awake state, H94
  autonomic, cardiovascular regulation during low-frequency acceleration, H998
  prostaglandin synthesis, microvascular response, skeletal muscle, H51
Blood
  constituents: *see* specific constituent
  volume: *see* Volume
Blood-brain barrier, transport, histamine effects, H307
Blood flow: *see also* Circulation; Microcirculation
  capillary, measurement of, H1018

Blood flow (*continued*)
cerebral
bicarbonate ion modulation, hypoxia and hypercapnia, H33
fastigial cerebellar nucleus stimulation and, H226
intracerebral arterioles, H598
coronary
adenosine and, awake state, H628
adenosine effects, H538
α-adrenergic receptor blockade effects
adrenergic stimulation and, awake state, H13
aminophylline effects, H480
awake state, H94
experimental diabetes (lamb), H252
mitochondrial oxidative phosphorylation role in, H159
nonischemic myocardial hypoxia, H514
programmable pressure control system, H796
coronary sinus, training effects, angina pectoris, H830
fatty acid-deficient diet effects, kidney, H61
hepatic and renal, prostacyclin effects, H584
muscle
capillary control, rest and exercise, H196
exercise, H296
myocardial
aging effects (sheep), H729
autonomic indices, ischemic heart, H788
regional ischemia, H26
stellate ganglia stimulation and, H410
stenosis and, exercise, H698
sympathetic nerve stimulation and denervation effects, H566
placental, fetal size and (guinea pig), H404
regional
heart failure, awake state, H974
microsphere redistribution, intestines, H123
renal ischemia and, H869
vasopressin effects, awake state, H663
regulation
adenosine and, awake state, H628
adenosine infusion, muscle, H181
renal, intrarenal converting enzyme inhibition and, H277
variability, radiolabeled microspheres, H371
Blood pressure
hypertension, anteroventral third ventricle lesion, H614
muscular blood flow, running speed and, H296
systemic, baroreflex bradycardia inhibition and, H607
training effects, angina pectoris, H830
Body, position: *see* Posture
Bradycardia, baroreflex, inhibition, aortic nerve excitatory afferents, H607
Bradykinin, high salt, prostaglandins in stroke-prone spontaneous hypertension, H360
Brain
circulation, indomethacin effects, H416
cortex, oxidation-reduction changes, hypercapnia, H619
fastigial nucleus stimulation and, H226
Brain ventricles, anteroventral third lesion, sodium-chloride hypertension, salt sensitivity, H614
Bypass, thromboxane effects, acute pulmonary hypertension (sheep), H471

C

Calcium
concentration, plasma, hypertension, H365
depolarization, diastolic, H767
influx, muscarinic inhibition of, ventricular muscle (chick), H434
maximum velocity of contraction, heart, H391
release mechanism, calcium-induced, vascular smooth muscle, H641
tolerance, cardiac cells, anoxia/acidosis effects, H448
Calcium ions
activator, vascular heterogeneity, smooth muscle, H553
concentration, plasma, hypertension, H365
intracellular activity, stimulation in Purkinje strands (sheep), H133
Calorimetry, on-line, interventricular septum (rabbit), H289
cAMP: *see* Adenosine monophosphate, cyclic
Capacitance, internal, right ventricle outflow and, H99
Capacitance vessels, β-adrenergic dilator effects, skeletal muscle, H819
Capacity, membrane, hypertrophied myocardium, H917
Capillaries
control, rest and exercise, red muscle, H196
density, spontaneous hypertension, H243
exchange, β-adrenergic dilator effects, skeletal muscle, H819
growth, long-term stimulated muscle, H530
hydraulic conductivities, muscle (chicken), H491
right ventricular hypertrophy, exercise effects, H856
Captopril, renal blood flow and, H277
Carbohydrates, metabolism, fetal, hypoxemia in utero, H959
Carbon dioxide, coronary dilator actions of, experimental diabetes (lamb), H252
Carbon monoxide
circulatory response and, cerebral (lamb), H27
exposure effects, postnatal, H328
Cardiac cells
calcium-tolerant, anoxia/acidosis effects, H448
right ventricular hypertrophy, exercise effects, H856
Cardiac muscle: *see* Muscle, heart
Cardiac nerves, stimulation, cardiac responses to, H219
Cardiac output
anesthesia, response to hemorrhage and, H713
nitroglycerin effects, heart failure, awake state, H974
rate coherence, H501
vasopressin infusion, dehydration and, awake state, H663
water retention effects, H934
Cardiac vein, anterior, oxygen metabolism, open chest, H761
Cardiomegaly, carbon dioxide exposure, postnatal, H328
Cardiopulmonary resuscitation, high intrathoracic pressure, carotid artery resistance and, H259
Cardiovascular regulation, low-frequency acceleration and, H998
Carnitine
L- and D-labeled, mechanical effects, heart (swine), H691
myocardial levels, diabetes and, H154
Carotid artery
resistance: *see* Resistance
stenosis, pressure, distal resistance and vasoconstriction relations, H236
Carotid sinus
baroreceptor sensitivity, newborn and adult, H548
baroreflex bradycardia inhibition, H607
Catecholamines
electrophysiological changes, myocardial ischemia (rabbit), H318
lower body negative pressure and, H970
plasma, training and, angina pectoris, H830
posture and, heart rate, H676
release, vasodepressor action and, awake state (chicken), H456
sodium activity and, heart, H670
sympathetic nerve changes, hypertrophied right ventricle (guinea pig), H175
Catheter, injection, left atrium, awake state, H488
Cations, transport, digoxin effects (sheep), H519
Central nervous system, hemodynamics, anesthetic depression of, decerebrated rat, H837
Cerebellum, fastigial nucleus stimulation, cerebral vasodilation and, H226
Cerebral arteries, transmural stimulation, relaxant responses to, H145
Cerebrospinal fluid: *see* Fluid
Cerebrovascular transport, histamine effects, H307
Cerebrum, blood flow, carbon monoxide and hypoxia effects (lamb), H27
Cesium, depolarization, diastolic, H767
Chloralose, microvascular effects of, H837
Cholera toxin, inotropic effect, acetylcholine inhibition of, ventricular muscle (chick), H434
Choline acetyltransferase
activities, ischemic heart, H788
sympathetic nerve changes, hypertrophied right ventricle (guinea pig), H175
Cholinergic receptors: *see* Receptors
Chromatography, column, norepinephrine metabolism, pulmonary artery endothelium, H732
Cineradiography, high-speed, epicardial segment rotation, H1
Circulation: *see also* Blood flow; Microcirculation
cerebral
carbon monoxide and hypoxia effects (lamb), H27
indomethacin effects, H416
chemical sympathectomy and, fetal, neonatal and adult (sheep), H113
collateral, renin-angiotensin system and, renal ischemia, H869
coronary, α-adrenergic receptor blockade effects, awake state, H94
peripheral, regulation of, hypoxia, H1010

redistribution of microspheres, perfusion, intestinal, H123
Circulation-metabolism coupling: *see* Coupling
Citric acid, development, heart, fetal, H87
Cocaine, norepinephrine accumulation and, saphenous vein, H424
Colloid osmotic pressure: *see* Pressure
Conduction, concealed, atrial fibrillation, H754
Conduction velocity, structure and function of atrioventricular node, H41
Contractile reserve: *see* Muscle, heart
Contraction-relaxation cycle, vascular smooth muscle, H641
Contraction: *see* Muscle; Muscle, heart
Converting enzyme
  inhibitor, renal ischemia and, H869
  intrarenal, inhibition of, renal blood flow and, H277
Coronary artery
  occlusion
    autonomic indices, ischemic heart, H788
    graded, H788
    myocardial blood flow during, H566
    myocardium at risk effects, H340
    necrotic wavefront movement after, H682
    renal nerve activity during, H170
  right, oxygen metabolism, open chest, H761
  stenosis, pressure, distal resistance and vasoconstriction relations, H236
Coronary dilation, hypoxic, tissue adenosine and, H514
Coronary dilators, adenosine and carbon dioxide, experimental diabetes (lamb), H252
Coronary flow: *see* Flow
Coronary sinus, catheterization, adenosine and coronary blood flow, awake state, H628
Corticosterone, norepinephrine accumulation and, saphenous vein, H424
Coupling
  circulation-metabolism, capillary control, red muscle, H196
  pharmacomechanical, vascular smooth muscle, H641
Creatine analogue, adenosine triphosphate depletion and, ischemic heart, H911
Cremaster muscle
  anesthetic depression, decerebration, H837
  microvascular sensitivity, prostaglandins, decerebrate rat, H844
Current, transient inward and outward, cardiac Purkinje fibers (sheep), H77
Cyclic AMP: *see* Adenosine monophosphate, cyclic
Cyclic GMP: *see* Guanosine monophosphate, cyclic
Cyclocreatine phosphate, adenosine triphosphate depletion and, ischemic heart, H911
Cyclooxygenase inhibitors, fatty acid-deficient diet effects, renal vasoconstriction, H61
Cytochrome *c*, carbon dioxide exposure and, postnatal, H328

D

Decerebration
  anesthesia, microvascular effects of, H837
  microvascular sensitivity, prostaglandins, skeletal muscle, H844
  prostaglandin synthesis, microvascular response to, skeletal muscle, H51
Defibrillation, transthoracic, sequentially applied pulses (calf), H982
Dehydration, cardiac output during, awake state, H663
Denervation
  adrenergic, hypoxia, hindlimb resistance in, H1010
  capillary control, rest and exercise, red muscle, H196
  microvascular rarefaction, spontaneous hypertension, H243
  renal, spontaneous hypertension and, H284
  sinoaortic, digoxin effects, cardiopulmonary baroreflexes, H815
Deoxycorticosterone, collateral circulation and, renal ischemia, H869
Deoxyglucose, cerebral, prostaglandin effects, H416
Deoxyribonucleic acid, carbon dioxide exposure and, postnatal, H328
Depolarization, diastolic, cardiac Purkinje fibers, H767
Desmopressin, water retention, systemic hemodynamics and, H934
Development, ultrastructural and enzymatic, heart, fetal, H87
Diabetes
  alloxan, sympathetic and vascular dysfunction in, H139
  carnitine transport, myocardium, H154
  coronary dilator actions in (lamb), H252
  experimental, coronary dilator actions of adenosine and carbon dioxide (lamb), H252
Diabetes mellitus, juvenile, sympathetic and vascular dysfunction in, H139
Diet: *see* Feeding
Digitalis, toxicity, cardiac Purkinje fibers, H767
Digoxin
  age-related effects, cation transport (sheep), H519
  sensitization, cardiopulmonary baroreflexes, H815
Diphosphoinositide, metabolism, spontaneous hypertension, erythrocytes, H590
Discharge, spontaneous, strophanthidin-induced, cardiac Purkinje fibers, H767
Dopamine-β-hydroxylase
  sympathetic nerve changes, hypertrophied right ventricle (guinea pig), H175
  water retention and, systemic hemodynamics, H934

E

Edema
  blood-brain transport, histamine effects, H307
  formation, norepinephrine effects, forelimb, H575
  pulmonary
    iboprofen therapy, H903
    α-naphthylthiourea (sheep), H507
Electrical properties, myocardial, hypertrophied myocardium, H917
Electrocardiography, QRS power spectrum, exercise effects, H964
Embryo, cholera toxin inotropic effect, muscarinic inhibition of, ventricular muscle (chick), H434
Energy metabolism
  oxidation-reduction changes, hypercapnia, brain, H619
  thyroxine effects, exogenous myocardial lactate oxidation, H722
Enzymes: *see also* specific enzyme
  activities, ischemic heart, H788
  glycolytic and citric acid cycle activities, heart, fetal, H87
Epicardial segment, rotation, myocardium, H1
Epicardium, deformation, ejection and, H379
Epinephrine
  anesthesia, response to hemorrhage and, H713
  dilator effects, skeletal muscle, H819
  water retention and, systemic hemodynamics, H934
Erythrocytes
  flux, measurement of, H1018
  spontaneously hypertensive, phospholipids in, H590
Evans blue dye, aortic albumin and, serum effects, H708
Exercise
  capillary control, red muscle, H196
  coronary stenosis, myocardial blood flow and, H698
  hyperemia, adenosine infusion and, H181
  microsphere injection, left atrium, awake state, H488
  posture effects, heart rate and, H676
  QRS power spectrum and, H964
  running, muscular blood flow, H296
  strenuous, right ventricular hypertrophy and, H856
  training, angina pectoris and, skeletal muscle and heart, H830
  treadmill, adenosine and coronary blood flow, awake state, H628
Extraneuronal metabolism, norepinephrine, saphenous vein, H424

F

Fatty acids
  deficiency, renal vasoconstriction and, H61
  metabolism, carnitine effects, heart (swine), H691
  specific activity, aorta, H128
Feedback, system, coronary flow, H796
Feeding
  adenosine, coronary blood flow during, awake state, H628
  fatty acid-deficient diet, renal vasoconstriction and, H61
Femoral artery, oxygen consumption rate, H948
Fetus: *see also* Placenta
  blood flow and oxygen delivery, myocardial (sheep), H729
  chemical sympathectomy, circulatory effects of (sheep), H113
  oxygen and carbohydrate metabolism, myocardial, hypoxemia in utero, H959
  size, placental blood flow effects (guinea pig), H404
  ultrastructural and enzymatic development, heart, H87
Fiber-optic photometric probe, myocardial pH measurement, regional ischemia, H1027

Fibrillation
atrial, atrioventricular nodal conduction during, H754
ventricular, myocardium at risk and, H340
Flow
coronary
adrenergic stimulation effects, H13
perfusion territory relations, H738
Fluid
cerebrospinal, bicarbonate ion modulation, hypoxia and hypercapnia, H33
transcapillary, exchange, muscle (chicken), H491
volume: *see* Volume
Fluorodeoxyglucose, glucose metabolic rate, myocardial, H884
Force-frequency relations
cardiac, Purkinje strands (sheep), H128
postextrasystolic potentiation, ventricular, H990
Force-velocity relations, myosin, heart atria and ventricles, H391
Forelimb, lymph flow, norepinephrine effects, H575
Fourier analysis, QRS power spectrum, exercise effects, H959
Frequency response
low-frequency acceleration, cardiovascular regulation during, H998
blood flow, coronary, H796

G

Ganglia, stellate, stimulation, regional coronary vasoconstriction, H410
Gap junction: *see* Junction
Gastric distension, sympathoadrenal mechanism response to, H748
Gastric mucosa, microsphere redistribution, H123
Glucose, metabolic rate, myocardial, H884
Glycogen
myocardial, ischemic heart, H911
utilization, aorta, H128
Glycolytic acid, development, heart, fetal, H87
Glycolysis, oxidation-reduction changes, hypercapnia, brain, H619
Glycosides, cardiac, digoxin effects (sheep), H519
Guanosine monophosphate, cyclic, muscarinic inhibition, ventricular muscle (chick), H434
Gut: *see* Intestines

H

Heart
adenosine monophosphate, cyclic, muscarinic inhibition (chick), H434
adult, anoxia and acidosis effects, H448
calorimetry, arterially perfused, H289
carnitine effects, metabolic and mechanical (swine), H691
changes, training effects, angina pectoris, H830
denervation, myocardial ischemia and, H566
development, fetal, H87
failure
conscious model, nitroglycerin effects, H974
sympathetic nerve changes in (guinea pig), H175
function, experimental diabetes (lamb), H252
hypertrophy, tibial length and, H941
intracellular sodium activity and tension, catecholamine effects, H670
ischemic
autonomic indices, H788
creatine analogue effects, H911
isolated perfused, mitochondrial oxidative phosphorylation effects, blood flow, H159
Purkinje fibers: *see* Purkinje fibers
responses, tonic vagal stimulation, H219
restitution of contraction (sheep), H68
sinoatrial node, primary pacemaking cell, model, H207
size, aging and, H941
slow response, lysophosphatide effects, H187
sympathetic innervation, reduced, newborn, H20
Heart atria
contraction, vagal stimulation and, H219
fibrillation, atrioventricular nodal conduction during, H754
force-velocity relations, myosin, H391
left, microsphere injection, awake state, H488
pacing
atrioventricular conduction and, H525
cardiac output and, H501
coronary vasodilation, adenosine effects, H538
Heart rate
baroreflex bradycardia inhibition, aortic nerve excitatory afferents and, H607
cardiac output, H501
changes, autonomic activity and, atrioventricular conduction, H525
chemical sympathectomy effects, fetal, neonatal and adult, H113
control, vagal stimulation and, H219
initial response, posture, H676
muscular blood flow, running speed and, H296
training effects, angina pectoris, H830
Heart ventricles
acetylcholine inhibition, cholera toxin inotropic effect (chick), H434
defibrillation, sequentially applied pulses (calf), H982
force-velocity relations, myosin, H391
function, sympathetic innervation and, newborn, H20
impedance servo pump, H346
ischemic, renal nerve activity and, H170
potassium ion accumulation, myocardial ischemia (rabbit), H318
Heart ventricles, left
graded coronary artery occlusion effects, H852
oxygen metabolism in, open chest, H761
wall mechanics, ejection, H379
Heart ventricles, right
helical fibers, myocardial contraction and, H1
hypertrophy
strenuous exercise and, H856
sympathetic nerve changes and (guinea pig), H175
outflow prediction, internal capacitance and resistance, H99
oxygen metabolism in, open chest, H761
Heat, calorimetry, interventricular septum (rabbit), H289
Helical fibers, myocardial, contraction effects, H1
Hematocrit, microvessel, measurement, H1018
Hemodynamics
systemic, desmopressin-induced water retention and, H934
vasopressin, regional blood flow and awake state, H663
Hemorrhage
protein redistribution, hypoproteinemia (sheep), H803
response, anesthesia effects, H713
Heterogeneity, vascular, sodium-potassium exchange, smooth muscle, H553
Hindlimb, resistance: *see* Resistance
Histamine
intra-arterial, blood-brain transport and, H307
lymph flow, forelimb, H575
Histotoxicity, cerebral circulatory response and (lamb), H27
Hydrogen ions, concentration, regional ischemia, H1027
6-Hydroxydopamine, circulatory effects, fetal, neonatal, and adult, H113
Hydroxyproline, carbon dioxide exposure and, postnatal, H328
Hypercapnia
bicarbonate ion modulation, cerebral blood flow, H33
coronary dilator actions, experimental diabetes (lamb), H252
oxidation-reduction changes, brain cortex, H619
Hyperemia
functional, aminophylline effects, H480
reactive and exercise, adenosine infusion and, H181
Hyperresponsiveness, vascular, renal artery stenosis, H779
Hypertension
aldosterone-induced, altered arterial ion transport, H927
calcium concentrations, plasma, H365
pulmonary, thromboxane effects, extracorporeal perfusion (sheep), H471
renal, ouabain and potassium relaxation, aorta, H896
sodium-chloride, Dahl salt sensitivity, anteroventral third ventricle lesions and, H614
spontaneous
arteriolar adenosine monophosphate production, H398
microvascular rarefaction in, H243
phosphoionositide metabolism, erythrocytes, H590
renal nerves and, H284
stroke-prone, salt loading and prostaglandins, H360
water retention and, desmopressin-induced, H934
Hyperthyroidism, lactate oxidation, cardiac, H722
Hypertonic saline solution, infusion, vasopressin stimulation and, H560
Hypertrophy
cardiac, tibial length and, H941
passive electrical properties, myocardium, H917
right ventricular, strenuous exercise and, H856
thyroxine effects, exogenous myocardial lactate oxidation, H722

Hypoproteinemia, protein redistribution and (sheep), H803
Hypoxemia
  inflammatory response to aspiration, ibuprofen therapy for, H903
  in utero, myocardial oxygen and carbohydrate metabolism, fetal, H959
Hypoxia
  bicarbonate ion modulation, cerebral blood flow, H33
  hindlimb resistance, adrenergic blockade, H1010
  hypoxic, cerebral circulatory response and (lamb), H27
  myocardial
    coronary blood flow and, H159
    increased adenosine and, H514
    oxygen and carbohydrate metabolism, fetal, H959
  oxygen consumption rate, arterial wall, H948
  potassium accumulation and, myocardial ischemia (rabbit), H318

I

Ibuprofen, inflammatory response modification, aspiration, H903
Indomethacin
  cerebral circulation, metabolic effects and, H416
  microvascular response, skeletal muscle, H51
  salt loading and, stroke-prone spontaneous hypertension, H360
Infant: *see* Neonate; Newborn
Infarction
  myocardial, necrotic wavefront movement, H682
  size, cardiac sympathetics and, H566
Innervation
  cardiac sympathetic, reduced, newborn, H20
  nonadrenergic noncholinergic, cerebral arteries, H145
Inotropy, heart: *see* Muscle, heart
Insulin, carnitine transport and, myocardial, diabetes, H154
Interventricular septum, arterially perfused, on-line calorimetry in (rabbit), H289
Intestines, microspheres, redistribution of, H123
Iodoantipyrine, ^{14}C-labeled, cerebral blood flow and, cerebellum, H226
Ions, transport, altered, aldosterone hypertension and, H927
Ischemia
  heart
    autonomic indices in, H788
    creatine analogue effects, H911
  myocardial
    cardiac sympathetics and, H566
    contrasting contraction patterns, H852
    lysophosphatides and slow response, H187
    mitochondrial alterations and ^{99m}Tc pyrophosphate uptake, H268
    necrotic wavefront movement, H682
    potassium ion accumulation during (rabbit), H318
  on-line calorimetry, interventricular septum (rabbit), H289
  regional, myocardial pH during, H1027
  renal, renin-angiotensin system and collateral circulation after, H869
Isoproterenol
  sodium activity and, heart, H670
  sympathetic innervation and, cardiac, newborn, H20
  volume overload, myocardial failure and, H876
Isotopes, quantification, blood flow measurement variables, H371

J

Junction, gap, structure and function of atrioventricular node, H41

K

Kidney
  blood flow: *see* Blood flow
  hemodynamics, intrarenal converting enzyme inhibition and, H277
  hypertension, ouabain and potassium relaxation, aorta, H896
  ischemia, renin-angiotensin system and collateral circulation after, H869
  papilla: *see* Kidney papilla
  renal artery stenosis, fluid volume and pressor responses, H779
  vasoconstriction, fatty acid-deficient diet effects, H61
Kidney papilla, plasma flow, anteroventral third ventricle lesion, H614

L

Lactate, myocardial, oxidation, thyroxine effects, H722
Lactate dehydrogenase, carbon dioxide exposure and, postnatal, H328
Lidocaine hydrochloride, coronary occlusion, renal nerve activity during, H170
Linoleate, reduced intake, renal vasoconstriction and, H61
Lipids
  endogenous, utilization by aorta, H128
  inositol, turnover, erythrocytes, H590
Liver, vasculature, prostacyclin effects, awake state, H584
Loading
  impedance, servo pump, excised ventricle, H346
  pressure, myocardium, H862
Lung
  lymph, vascular injury, α-naphthylthiourea (sheep), H507
  vascular injury, dose-dependent, α-naphthylthiourea (sheep), H507
Lymph, protein concentration, modification, lymph nodes, H351
Lymph flow
  norepinephrine effects, forelimb, H575
  protein redistribution, hypoproteinemia (sheep), H803
Lymph nodes, modification of lymph, H351
Lymphoconstriction, norepinephrine effects, forelimb, H575
Lysophosphatides, slow response and, normal and ischemic heart, H187
Lysophosphoglycerides, slow response potentials and, normal and ischemic heart, H187

M

Mefenamate, prostaglandins and, microvascular sensitivity, decerebrate rat, H844
Membrane: *see* specific subject and site
Metabolic effects, indomethacin, H416
Metabolic rate, myocardial, glucose, H884
Metabolism: *see* specific subject and site
Metabolites
  vasoactive, nonischemic myocardial hypoxia, H514
  vasodilator, cerebral arterioles, H442
1-Methyl-3-isobutylxanthine, adenosine monophosphate, cyclic production, arteriolar, H398
Microcirculation: *see also* Blood flow; Circulation
  adenosine monophosphate, cyclic production, arteriolar, hypertension, H398
  anesthetic depression of, decerebrated rat, H837
  arterioles, intracerebral, H598
  hydraulic conductivities, capillary, muscle (chicken), H491
  measurement, H1018
  muscular, running speed and, H296
  neuromuscular, vascular smooth muscle, H641
  prostaglandin effects, skeletal muscle, decerebrate rat, H844
  prostaglandin synthesis effects, skeletal muscle, H51
Microelectrodes, ion selective, Purkinje strands (sheep), H128
Microspheres
  coronary stenosis, exercise, myocardial blood flow and, H698
  muscular blood flow, running speed and, H296
  radiolabeled
    blood flow, placental (guinea pig), H404
    blood flow measurement variability, H371
    injection, left atrium, awake state, H488
    nitroglycerin effects, heart failure, awake state, H974
  redistribution of, intestines, H123
  vasopressin infusion, cardiac output and, awake state, H663
Microvascular networks, capillary control, rest and exercise, red muscle, H196
Mineralocorticoids, hypertension, calcium concentrations, plasma, H365
Mitochondria
  alterations, ^{99m}Tc pyrophosphate uptake and, myocardial ischemia, H268
  oxidation-reduction changes, hypercapnia, brain, H619
  oxidative phosphorylation, coronary blood flow and, H159
  right ventricular hypertrophy, exercise effects, H856
mitochondrial, myocardial, ischemia, H268
Models
  arrhythmia, myocardium at risk, H340
  compartmental, glucose metabolic rate, myocardial, H884
  conscious, heart faiulure, nitroglycerin effects, H974
  hypertension, ionic and total calcium concentrations in plasma of, H365
  impedance servo pump, ventricular loading, H346
  mathematical, sinoatrial node, heart, H207
  oxygen transport, arterial wall, H948
  wall deformation, left ventricular, H379

Mucosa: *see* specific subject and site
Muscarinic inhibition, adenosine monophosphate, cyclic, heart (chick), H434
Muscle
  blood flow: *see* Blood flow
  capillaries, hydraulic conductivities (chicken), H491
  red, capillary control, rest and exercise, H196
Muscle, heart
  acetylcholine inhibition, cholera toxin inotropic effect, ventricle (chick), H434
  contractile force, volume overload and, H876
  contractile motion measurement, digital sonomicrometer, H634
  contractile reserve, postextrasystolic potentiation and, H990
  contraction, contrasting ischemic patterns, H852
  force-velocity relations, myosin, H391
  inotropy, digoxin effects (sheep), H519
  long-term stimulated, fiber profile and capillary density, H530
  voltage and time dependence, restitution of contractions (sheep), H68
Muscle, skeletal
  anesthesia, microvascular effects of, H837
  consecutive vascular sections, β-adrenergic dilator effects, H819
  long-term stimulated, fiber profile and capillary density, H530
  prostaglandins, microvascular sensitivity to, decerebrate rat, H844
  prostaglandin synthesis, microvascular response to, H51
  resistance, hypoxia, H1010
  training effects, angina pectoris, H830
Muscle, smooth
  arterial and venous, sodium-potassium exchange in, H553
  vascular
    aldosterone-induced hypertension, H927
    contraction-relaxation cycle, H641
    intracerebral arterioles, H598
    ouabain and potassium relaxation, renal hypertension, H896
    utilization of lipid, glycogen and protein, H128
Muscle fibers
  blood flow, running speed and, H296
  long-term stimulation effects, H530
Myocardium
  at risk, coronary artery occlusion and release, H340
  carnitine levels in, diabetes, H154
  contractility
    digoxin effects (sheep), H519
    vagal stimulation and, H219
  failure, volume overload and, H876
  function, α-adrenergic receptor blockade effects, awake state, H94
  glucose, metabolic rate of, H884
  graded coronary occlusion effects, H852
  helical fibers, contraction effects, H1
  hypertrophied, passive electrical properties of, H917
  intracellular sodium activity, catecholamine effects, H670
  oxygen and carbohydrate metabolism, fetal, hypoxemia in utero, H959
  oxygen requirements, prediction of, H862
  pH, regional ischemia, photometric measurement of, H1027
  stimulation, β-adrenergic, gastric distension, H748
Myocytes, cardiac: *see* Cardiac cells
Myofibrils, right ventricular hypertrophy, exercise effects, H856
Myoglobin, carbon dioxide exposure and, postnatal, H328
Myosin, force-velocity relations, heart atria and ventricles, H391

N

α-Naphthylthiourea, vascular injury, dose-dependent, lung (sheep), H507
Necrotic wavefront, movement, coronary artery occlusion and, H682
Neonate: *see also* Newborn
  carbon dioxide exposure effects, postnatal, H328
  chemical sympathectomy, circulatory effects (sheep), H113
  hypoxia, cerebral circulatory response during (lamb), H27
Nerve: *see also* specific nerve and site
  transmural stimulation, cerebral arteries, H145
Neuromuscular junction: *see* Junction
Neuronal metabolism, norepinephrine, saphenous vein, H424
Neuropathy, diabetic, experimental juvenile, H139
Neurotransmitters, synthesis, ischemic heart, H788
Newborn: *see also* Neonate
  baroreceptor sensitivity, carotid sinus, H548
  blood flow and oxygen delivery, myocardial (sheep), H729
  reduced cardiac sympathetic innervation, functional significance, H20
Nicotine, relaxant responses to, cerebral arteries, H145
Nitroglycerin, peripheral vascular effects, heart failure, awake state, model, H974
Nitroprusside, microvascular rarefaction, spontaneous hypertension, H243
Norepinephrine
  adrenergic stimulation, coronary blood flow, H13
  anesthesia, response to hemorrhage and, H713
  coronary vasodilation, adenosine effects, H538
  depolarization, diastolic, H767
  dilator effects, skeletal muscle, H819
  fatty acid-deficient diet, renal vasoconstriction, H61
  functional hyperemia, aminophylline effects, H480
  lymph flow and, forelimb, H575
  metabolism
    plasma effects, saphenous vein, 424
    pulmonary artery epithelium, H732
  plasma, myocardial failure and, H876
  renal, spontaneous hypertension and, H284
  response, lower body negative pressure, H970
  sodium activity and, heart, H670
  sodium-potassium exchange effects, smooth muscle, H553
  water retention and, systemic hemodynamics, H934
Nucleosides, cardiac, nonischemic myocardial hypoxia, H514
Nucleus, fastigial cerebellar, cerebral vasodilation and, H226

O

Ouabain
  binding, aorta, renal hypertension and, H896
  sodium-potassium exchange effects, smooth muscle, H553
  volume overload and, myocardial failure, H876
Oxidation, fatty acid, aorta, H128
Oxidation-reduction, changes, stimulation and hypercapnia, brain cortex, H619
Oxidative phosphorylation, mitochondrial, coronary blood flow and, H159
Oxygen
  consumption
    aorta, H128
    carnitine effects, heart (swine), H691
    myocardial, adenosine and, awake state, H628
    myocardial, aminophylline effects, H480
    myocardial, training effects, angina pectoris, H830
    rate, arterial wall, H948
  delivery
    aging effects (sheep), H729
    microcirculatory, measurement of, H1018
  metabolism
    coronary blood flow and, H159
    fetal, hypoxemia in utero, H959
    heart ventricles, open chest, H761
    myocardial, diabetes and (lamb), H252
  requirements, prediction of, myocardium, H862
  retraction, hypoxia (lamb), H27
  transport, rest and exercise, red muscle, H196
Oxygenation, myocardial, aging effects (sheep), H729
Oxyhemoglobin dissociation curve, hypoxia and, cerebral circulatory response (lamb), H27

P

Pacemaker, cardiac, response curve, model, H207
Pacemaking cells, primary, sinoatrial node, heart, H207
Palmitate, carnitine transport and, myocardial, diabetes, H154
Parasympathetic control, heart rate, posture effects, H676
Parasympathetic nervous system, vagal stimulation, cardiac responses to, H219
Pentobarbital, neural and humoral mechanisms, response to hemorrhage, H713
Perfusion
  capillary, long-term stimulation effects, muscle, H530
  extracorporeal, thromboxane effects on hypertension (sheep), H471
  pressure: *see* Pressure
  territory, coronary flow relations, H738
Pericoronary nerve, sympathetic response and, coronary occlusion, H170

Permeability
  capillary, plasma protein redistribution, hypoproteinemia (sheep), H803
  α-naphthylthiourea, dose-dependent vascular injury, lung (sheep), H507
pH
  cerebral blood flow, hypoxia and hypercapnia, H33
  myocardial, regional ischemia, photometric measurement of, H1027
Pharmacomechanical coupling: *see* Coupling
Phentolamine
  coronary effects, awake state, H94
  lymph flow, forelimb, H575
  microvascular response, skeletal muscle, H51
Phosphagen, utilization, ischemic heart, H911
Phosphate
  high-energy
    heart (swine), H691
    ischemic heart, H911
Phosphofructokinase, training and, angina pectoris, H830
Phosphoionositide, metabolism, spontaneously hypertensive erythrocytes, H590
Phospholipids, phosphorylation, erythrocytes, spontaneous hypertension, H590
Phosphorylation, myosin light chain, atria and ventricles, H391
Pinocytosis, blood-brain transport, histamine effects, H307
Placenta: *see also* Fetus
  size, fetal size and, blood flow effects (guinea pig), H404
Plasma
  constituents: *see* specific constituent
  norepinephrine accumulation, saphenous vein, H424
  protein: *see* Protein
  volume: *see* Volume
Plasmapheresis, protein redistribution and (sheep), H803
Poisson variable, blood flow, radiolabeled microspheres, H371
Polypeptides
  relaxant responses and, cerebral arteries, H145
  vasoactive intestinal, relaxant responses, cerebral arteries, H145
Posture, standing, heart rate response to, H676
Potassium
  depolarization, diastolic, H767
  relaxation, aorta, renal hypertension and, H896
  vascular heterogeneity, smooth muscle, H553
Potassium ion, extracellular accumulation, early myocardial ischemia (rabbit), H318
Potentials
  oscillatory, cardiac Purkinje fibers, H767
  slow response, lysophosphatides and, H187
Potentiation, postextrasystolic, contractile reserve and, H990
Power spectrum, QRS, exercise effects, H964
Prazosin, coronary effects, awake state, H94
Preload, coronary circulation and, awake state, H94
Pressor responses, renal artery stenosis, two-kidney, H779
Pressure
  arterial
    chemical sympathectomy effects, fetal, neonatal and adult, H113
    posture effects, H676
    water retention and, H934
  carotid artery, resistance, H259
  colloid osmotic, modification of lymph, H351
  coronary, programmable control system, H796
  loading, right ventricle outflow, H99
  lower body negative, vasopressin and norepinephrine response to, H970
  perfusion
    redistribution of microspheres, intestines, H123
    stenosis and, H236
  threshold, baroreceptor sensitivity, newborn, H548
  venous, cerebral arteriolar response to, H442
Pressure-diameter relations, oxygen requirements, myocardium, H862
Propranolol, coronary vasoconstriction, stellate ganglia stimulation, H410
Prostacyclin
  acute pulmonary hypertension and, extracorporeal perfusion (sheep), H471
  cerebral circulation, metabolic effects and, H416
  inflammatory response modification, aspiration, H903
  renin metabolism, liver, awake state, H584
Prostaglandins
  fatty acid-deficient diet, renal vasoconstriction and, H61
  microvascular sensitivity to, skeletal muscle, decerebrate rat, H844
  α-naphthylthiourea and, dose-dependent vascular injury, lung (sheep), H507
  renal and hepatic vasculature, renin clearance and, H584
  salt loading and, stroke-prone spontaneous hypertension, H360
  synthesis, microvascular response to blockade of, skeletal muscle, H51
Protein
  depletion, plasma protein redistribution (sheep), H803
  plasma, redistribution, acute protein depletion (sheep), H803
  utilization, aorta, H128
Pulmonary artery
  constriction, hypertrophied right ventricle (guinea pig), H175
  endothelium, norepinephrine metabolism, H732
Pulmonary edema: *see* Edema
Pump
  servo, impedance loading, excised ventricle, H346
  sodium
    electrogenic, smooth muscle, H553
    renal hypertension and, H896
  sodium-potassium, digoxin effects (sheep), H519
Purkinje fibers
  intracellular sodium activity, catecholamine effects, H670
  membrane currents, contractions and aftercontractions (sheep), H77
  slow response potentials, lysophosphatides and, H187
  spontaneous discharge, strophanthidin-induced, H767
  stimulation, intracellular calcium ion activity and (sheep), H133
  voltage and time dependence, restitution (sheep), H68
Pyruvate dehydrogenase, lactate oxidation, cardiac, H722

Q

Quinidine, relaxant responses and, cerebral arteries, H145

R

Radioisotopes, arterial transport, aldosterone-induced hypertension, H927
Rarefaction, microvascular, spontaneous hypertension, H243
Receptors
  adrenergic, coronary blood flow and, H13
  angiotensin, vasodepressor action, awake state (chicken), H456
  baroreceptors
    cardiopulmonary, renal nerve activity and volume expansion, H810
    carotid sinus, sensitivity of, newborn and adult, H548
    heart, posture effects, H676
  cholinergic, cardiac responses, vagal stimulation, H219
  histamine, blood-brain transport and, H307
  muscle, posture effects, H676
  ventricular, coronary artery occlusion and, H170
Red blood cells: *see* Erythrocytes
Redox: *see* Oxidation-reduction
Reflexes
  vasopressin and norepinephrine response lower body negative pressure, H970
  baroreflex
    arterial, anesthesia and response to hemorrhage, H713
    bradycardia, carotid, inhibition of, H607
    cardiopulmonary, digoxin effects, H815
    volume expansion, renal nerve activity and, H810
  exercise, heart rate, posture effects, H676
  gastric-cardiovascular, adrenergic mechanisms in, H748
Relaxation, cerebroarterial, nerve stimulation and nicotine, H145
Renal artery, stenosis, fluid volume and pressor responses, H779
Renal nerve
  activity
    coronary artery occlusion, H170
    volume expansion and, baroreflex regulation of, H810
  digoxin effects, cardiopulmonary baroreflexes, H815
  role in spontaneous hypertension, H284
Renin
  activity, myocardial failure and, H876
  metabolism, prostacyclin effects, liver, awake state, H584
Renin-angiotensin system
  anesthesia, response to hemorrhage and, H713
  collateral circulation and, renal ischemia, H869
  renal blood flow and, H277

Reperfusion, coronary artery occlusion and, H682
Reserpine, collateral circulation and, renal ischemia, H869
Resistance
  carotid artery, cardiopulmonary resuscitation, H259
  distal, stenosis and, H236
  hindlimb, hypoxia and, H1010
  membrane, hypertrophied myocardium, H917
  outflow prediction, right ventricle, H99
  vascular
    anesthesia and response to hemorrhage, H713
    salt-loading effects, indomethacin in stroke-prone spontaneous hypertension, H360
    splanchnic, prostacyclin effects, H584
    vasopressin stimulation and, H560
    water retention effects, H934
Resistance vessels, β-adrenergic dilator effects, skeletal muscle, H819
Respiration, anesthetic depression of, decerebrated rat, H837
Rhythm, generation, spinal transection, H463
Ribidium, transport, digoxin effects (sheep), H519
Rigor, measuring device, ischemic heart, H911
Running: *see* Exercise

S

Salbutamol, adenosine monophosphate, cyclic stimulation, arteriolar, hypertension, H398
Salt
  hypertension: *see* Hypertension
  loading, prostaglandins in stroke-prone spontaneous hypertension, H360
Saphenous vein, norepinephrine accumulation, plasma effects, H424
Saralasin, collateral circulation and, renal ischemia, H869
Septal artery, coronary flow, perfusion territory relations, H738
Sequential-shock strategy, transthoracic defibrillation (calf), H982
Serum, aortic albumin, Evans blue dye uptake and, H708
Servo pump: *see* Pump
Sinoatrial node, primary pacemaking cell, mathematical model, heart, H207
Sodium
  activity, intracellular, catecholamine effects, heart, H670
  depletion, hepatic, prostacyclin effects, H584
  plasma, anteroventral third ventricle lesion, H614
Sodium-potassium-ATPase
  aorta, renal hypertension, H896
  digoxin effects, heart (sheep), H519
Sodium-potassium exchange, vascular heterogeneity, smooth muscle, H553
Sodium-potassium pump: *see* Pump
Sodium pump: *see* Pump
Sonomicrometer
  coronary stenosis, exercise, myocardial blood flow and, H698
  digital, length and velocity measurement, H634
Spinal cord, transection, sympathetic nerve activity, H463
Starling forces, lymph modification, lymph nodes, H351
Stenosis
  coronary
    blood flow and, exercise, H698
    pressure, distal resistance and vasoconstriction relations, H236
  renal artery, fluid volume and pressor responses, H779
Stimulation
  chronic, muscle fiber profile and capillary density, H530
  current, sinoatrial node, heart, H207
Stress, transmural distribution, left ventricular wall deformation, H379
Stroke volume: *see* Volume
Strophanthidin, spontaneous discharge and, cardiac Purkinje fibers, H767
Succinate dehydrogenase, training and, angina pectoris, H830
Sucrose, blood-brain transport, histamine effects, H307
Sympathectomy
  chemical, circulatory effects, fetal, neonatal and adult (sheep), H113
  myocardial blood flow, coronary artery occlusion, H566
Sympathetic nerves
  cardiac, regional coronary vasoconstriction, H410
  discharge, spinal transection, H463
  coronary circulation and
    α-adrenergic receptor blockade effects awake state, H94
  changes, hypertrophied right ventricle (guinea pig), H175
  dysfunction, juvenile diabetes mellitus, H139
  stimulation, myocardial ischemia and, H566
Sympathetic nervous system
  anesthesia, response to hemorrhage and, H713
  stimulation, atrioventricular conduction and, H525
Sympathetic response, pericoronary nerve effects, coronary occlusion, H170
Sympathoadrenal mechanisms, hemodynamic responses, gastric distension, H748
Systolic wall, thickening, myocardial blood flow and, exercise, H698

T

^{99m}Tc pyrophosphate, uptake, mitochondrial alterations and, myocardial ischemia, H268
Teprotide, renal blood flow and, H277
Tetrodotoxin, depolarization, diastolic, H767
Thoracic aorta, wall, oxygen consumption rate, H948
Thoracotomy, microsphere injection, left atrium, awake state, H488
Thromboxanes
  acute pulmonary hypertension and, extracorporeal perfusion (sheep), H471
  inflammatory response modification aspiration, H903
Thyroxine, treatment, exogenous myocardial lactate oxidation, H722
Tibia, length, cardiac hypertrophy and, H941
Time dependence, resititution of contraction, heart (sheep), H68
Training: *see* Exercise
Transport: *see* specific subject and site
Treadmill: *see* Exercise
Triglycerides, utilization, aorta, H128
Trimazosin, coronary effects, awake state, H94
Triphosphoinositide, metabolism, spontaneous hypertension, erythrocytes, H590
Tyrosine hydroxylase
  activities, ischemic heart, H788
  sympathetic nerve changes, hypertrophied right ventricle (guinea pig), H175

U

Urethan, microvascular effects of, H837
Uterus, blood flow, fetal size and (guinea pig), H404

V

Vagal afferents
  cardiopulmonary baroreflexes, digoxin effects, H815
  coronary artery occlusion and, H170
  volume expansion, renal nerve activity and, H810
Vagus nerve
  stimulation, atrioventricular conduction and, H525
  tonic stimulation, cardiac responses during, H219
Vasa vasorum, oxygen consumption rate, H948
Vascular dysfunction, juvenile diabetes mellitus and, H139
Vascular tissue, norepinephrine accumulation, plasma effects, saphenous vein, H424
Vascular waterfall, coronary artery resistance and, H259
Vasoconstriction
  α-adrenergic, gastric distension and, H748
  coronary, stellate ganglia stimulation and, H410
  coronary stenosis and, H236
  microvascular rarefaction, spontaneous hypertension, H243
  renal, fatty acid-deficient diet effects, H61
Vasodepressor hormones, action, awake state (chicken), H456
Vasodilation
  bicarbonate ion modulation, cerebral blood flow, hypoxia and hypercapnia, H33
  cerebral, fastigial cerebellar nucleus stimulation and, H226
  coronary, adenosine role in, H538
  functional, capillary control, red muscle, H196
  increased venous pressure, cerebral arterioles, H442
  metabolic, hypoxia, H1010
  nitroglycerin effects, heart failure, awake state, H974
  redistribution of microspheres, intestines, H123
Vasoeffectors, cardiac, coronary blood flow and, H159
Vasomotion, prostaglandins, microcirculatory control, H51
Vasomotor nerves, β-adrenergic dilator effects, skeletal muscle, H819

Vasopressin
arginine, lower body negative pressure and, H970
cardiovascular effects of, H560
hypertension and, anteroventral third ventricle lesion, H614
infusion, cardiac output during, awake state, H663
water retention and, systemic hemodynamics, H934
Vasopressin antagonist, cardiovascular effects of, H560
Velocity, measurement, digital sonomicrometer, H634
Ventricles: *see* Brain ventricles; Heart ventricles
Ventricular fibrillation: *see* Fibrillation
Ventriculoatrial conduction, structure and function of atrioventricular node, H41
Voltage dependence, restitution of contraction, heart (sheep), H68
Volume
blood, renal artery stenosis and, H779
fluid, renal artery stenosis, two-kidney, H779
loading, myocardium, H862
overload
myocardial failure and, H876
nitroglycerin effects, awake state, H974
plasma, renal artery stenosis and, H779
stroke, cardiac output-rate coherence, H501
ventricular, servo pump control of, H346
Volume expansion
digoxin effects, cardiopulmonary baroreflexes, H815
plasma, water retention effects, H934
renal nerve activity and, baroreflex regulation of, H810

W

Water
retention, desmopressin-induced, systemic hemodynamics and, H934
total body, renal artery stenosis and, H779
Weight, fetal, placental blood flow and (guinea pig), H404

Author Index to Volume 12

Abboud, F. M., H810, H815
Adair, T. H., H351
Agarwal, J. B., H852
Alexander, J. E., H99
Anderson, R. J., H934
Angerson, W. J., H307
Anversa, P., H856
Apstein, C. S., H682
Ardell, J. L., H463
Armstrong, R. B., H296
Aronson, R. S., H917
Arts, T., H379
Ashihara, T., H360
Assali, N. S., H113
Austin, M., H340

Bacchus, A. N., H628
Banka, V. S., H852
Barber, B. J., H181
Barber, M. J., H566
Barger, A. C., H713
Barman, S. M., H463
Barnard, R. J., H862
Barrio, J. R., H884
Bashour, F. A., H512
Battaglia, F. C., H404
Baylerian, M. S., H328
Beghi, C., H856
Berne, R. M., H628
Bhargava, V., H964
Bhatnagar, R. K., H175
Bianchi, J., H754
Bockman, E. L., H512
Bodai, B. I., H803
Bodenheimer, M. M., H852
Boerth, R. C., H20
Borst, C., H676
Bourassa, M. G., H830
Bove, A. A., H1, H236
Brinkman, C. R., III, H113
Bristow, D. G., H207
Buckberg, G. D., H862
Buerk, D. G., H948
Buja, L. M., H268
Burkhoff, D., H346
Burns, A. H., H722

Cain, S. M., H1010
Campbell, K. B., H99
Canty, J. M., H796
Carey, R. A., H236
Caride, V. J., H869
Castellana, F. S., H634
Chace, K. V., H128
Chapler, C. K., H1010
Charlebois, J., H830
Charocopos, F., H560
Chen, I. I. H., H243
Chien, K. R., H268
Chuck, L., H391
Clark, J. W., H207
Cloix, J.-F., H590
Cohen, J. M., H259
Cohn, J. N., H970
Connelly, C., H682
Cooper, M. W., H990
Corr, P. B., H187
Côté, P., H830
Coutu, M. D., H434
Cowley, A. W., H970
Crystal, G. J., H512

Dacey, R. G., Jr., H598
Davis, J. A., H175
Davis, J. O., H584
De Champlain, J., H830
De Mey, J. G., H551
Demling, R. H., H803
Dériaz, O., H663
De Rijk, L. G., H676
Detweiler, D. K., H499
Dietz, J. R., H584
Dinelle, Y., H830
Dodd, L., H528
Dole, W. P., H371
Dora, E., H619
Dowell, R., H243
Downey, H. F., H512
Downing, S. E., H252
Dreifus, L. S., H754
Duling, B. R., H598, H1018
Duncan, H. W., H862
Dunham, B., H903
Dunham, E. W., H61
Dunning, A. J., H676
Dusseau, J. W., H398
Dzielak, D. J., H284

Echtenkamp, S. F., H584
Ely, S. W., H628
Erath, H. G., Jr., H20
Erecińska, M., H159
Erkkola, R., H113
Ertel, P. J., H139
Evans, J. M., H998

Faber, J. E., H51, H837, H844
Fanning, C. M., H328
Ferguson, R. J., H830
Fernandez, L. A., H869
Finkenberg, J. G., H862
Fintel, M., H722
Fisher, D. J., H729, H959
Flaim, S. F., H974
Flynn, J. T., H505
Fozzard, H. A., H68, H133, H670
Francis, G. S., H970
Freas, W., H424
Freeman, R. H., H584
Friedman, W. F., H517
Frierson, J. L., H196
Fry, D. L., H708

Galardy, R. E., H869
Gallagher, K. P., H698
Ganguli, M., H614
Gardner, M. E., H990
Garwitz, E. T., H927
Gavras, H., H560
Gebber, G. L., H463
Gee, M. H., H505
Gibbons, W. R., H68, H77
Gold, J. H., H982
Goldberger, A. L., H964
Goldsmith, S. R., H970
Goldstick, T. K., H948
Goodman, C. A., H634
Gordey, R. L., H738
Gore, R. W., H491
Goto, A., H614
Graham, D. I., H307
Graham, T. P., Jr., H20
Gray, S. D., H528
Greenfield, J. C., Jr., H488
Grega, G. J., H575
Greif, B. J., H788
Grome, J. J., H416
Gross, P. A., H934
Gross, P. M., H307
Gross, R. W., H187
Gustafsson, D., H819
Guyton, A. C., H181, H351
Gwirtz, P. A., H13
Gyulai, L., H619

Haddy, F. J., H424, H575
Hagen, E. C., H896
Haraoka, S., H761
Harms, B. A., H803
Harper, A. M., H307
Harrell, F. E., Jr., H340
Harris, P. D., H51, H837, H844
Hartigan, P. M., H434
Hattori, S., H852
Hatzinikolaou, P., H560
Havill, A. M., H505
Hechtman, H. B., H903
Helfant, R. H., H852
Hernandez, Y. M., H682
Hester, R. L., H181
Heymann, M. A., H729, H959
Hillman, J., H819
Hintze, T. H., H94
Hollosi, G., H391
Hond, A., H676
Honig, C. R., H196
Horwitz, L., H934
Hougen, T. J., H517
Huang, S.-C., H884
Hudlická, O., H528
Hume, M. C., H862
Hurst, T. W., H480
Hutchins, P. M., H398
Huttemeier, P. C., H471

Iadecola, C., H226
Ibarra, J., H748
Imaizumi, T., H360
Ingram, L. A., H738
Ishikawa, S., H767
Ito, Y., H641
Itoh, T., H641
Iwai, J., H614

Jackson, D. L., H371
James, T. N., H41
Johnson, J. A., H779
Johnson, J. C., H896
Johnson, M. A., H614
Jones, A. W., H927
Jones, C. E., H480
Jones, C. T., H87
Jones, M. D., Jr., H27
Jones, S. B., H566
Joshua, I. G., H51

Keim, C. R., H187
Kelly, P. A. T., H416
Kemper, W. S., H698
Kendrick, J. E., H607
Kent, R. L., H236
Keung, C.-S., H917
Keung, E. C. H., H917
Khosla, M. C., H456
Kikkawa, Y., H856
Kitamura, K., H641
Klavano, P. A., H99
Knabb, R. M., H628
Knapp, C. F., H998
Koehler, R. C., H27, H33
Kontos, H. A., H442
Kounenis, G. K., H277
Koutouzov, S., H590
Kovach, A. G. B., H619
Kraft, E. J., H277
Kramer, G. C., H803
Krausz, M. M., H903
Krivokapich, J., H884
Kulkarni, P., H268
Kuriyama, H., H641
Kurz, K. D., H779
Kusachi, S., H761

Lado, M. G., H133
Lakatta, E. G., H941
Langer, G. A., H289
Laughlin, M. H., H296
Lee, B. I., H187
Lee, J. C., H252
Levicky, V., H856
Levine, L., H903
Levy, M. N., H219, H523
Liard, J. F., H663
Liedtke, A. J., H691
Lim, K. O., H346
Lipsius, S. L., H68, H77
Longhurst, J. C., H748
Lund, D. D., H175, H788
Lundvall, J., H819
Lust, R. M., Jr., H390
Lutherer, L. O., H990
Luzzi, F. A., H340

MacGregor, D. C., H1027
Macho, P., H94
Mahar, C. Q., H691
Makowski, E. L., H404
Manders, W. T., H713
Manfredi, J. P., H536
Marche, P., H590
Marquis, J. A., H998
Martin, E. G., H471
Martin, P. J., H219, H523
Masuda, Y., H523
Mates, R. E., H796
Matson, G. L., H607
Matsuda, Y., H219
Matsuzaki, M., H698
Maxwell, L. C., H123
Mazgalev, T., H754
McCulloch, J., H416
McDaniel, W. C., H982

McDonagh, P. F., H491
McDonald, S. L., H856
Meier, G. D., H1
Melbin, J., H501
Melchior, G. W., H708
Meschia, G., H404
Meyer, P., H590
Michelson, E. L., H754
Miller, B. D., H810, H815
Miller, F. N., H844
Mitschelen, J., H708
Moellinger, D. W., H982
Moffatt, D. S., H351
Mueller, S. M., H139
Mueller, T. M., H139
Mukherjee, A., H268
Muldoon, S. M., H424
Murad, S., H113
Myers, S. A., H404

Nagashima, H., H761
Nakai, M., H226
Nakamura, M., H360
Nakamura, Y., H456
Neely, J. R., H154
Nellis, S. H., H691
Newman, W. H., H876
Nicar, M., H268
Ninomiya, I., H170
Nishi, K., H546
Nishiki, K., H159
Nishimura, H., H456
Nishiyama, O., H761
Noordergraaf, A., H501
Norman, R. A., Jr., H284
North, W. G., H560
Nuutinen, E. M., H159
Nuwayhid, B., H113

Odessey, R., H128
Odoroff, C. L., H196
O'Neill, J. T., H575
Osakada, G., H698
Ottaviano, R., H505

Pappano, A. J., H434
Parmley, W. W., H391
Parry, D., H87
Paulsen, A. W., H351
Payne, C. G., H779
Penney, D. G., H328
Péronnet, F., H830
Peterson, M. B., H471
Phelps, M. E., H884
Phillips, H. R., H488
Pickard, J. D., H416
Pisarri, T. E., H607
Ponce-Hornos, J. E., H289
Premkumar, A., H505
Prewitt, R. L., H243
Privitera, P. J., H876

Rakusan, K., H941
Randall, D. C., H998
Randall, J. R., H480
Randall, W. C., H410, H566
Rankin, G. O., H365
Refsum, H., H391
Reis, D. J., H226
Rembert, J. C., H488
Reneman, R. S., H379
Renkin, E. M., H528, H803
Ricchiuti, N. V., H289
Riedel, G. L., H123
Riffle, R. A., H499
Ringo, J. A., H99
Rinkema, L. E., H410
Roberts, J. J., H911
Roberts, S. A., H982
Robertson, J. M., H862
Rolph, T. P., H87
Rorie, D. K., H732
Rosenblatt, J. I., H371
Roskoski, R., Jr., H175, H788
Ross, J., Jr., H698
Rouleau, L., H391
Rubio, R., H628
Rudolph, A. M., H729, H959

Sagawa, K., H346
Saito, D., H761
Sakr, H. M., H61
Santamore, W. P., H236
Sarelius, I. H., H1018
Scheel, K. W., H738
Schelling, P., H663
Schmid, P. G., H175, H788
Schrier, R. W., H934
Schuder, J. C., H982
Schwartz, D. J., H670
Selin, C. E., H884
Shepherd, A. P., H123
Shepro, D., H903
Sherf, L., H41
Sheu, S.-S., H133
Shine, K. I., H318, H884
Siripaisarnpipat, S., H779
Snyder, D. W., H187
Sobel, B. E., H187
Spanier, A. M., H448
Sparks, H. V., Jr., H536
Sparks, J. W., H404
Spath, J. A., Jr., H505
Spurgeon, H. A., H941
Stack, R. S., H488
Steward, D. J., H1027
Stoeckel, H., H982
Stone, H. L., H13
Strauss, H. C., H340
Suehiro, S., H170
Sunagawa, K., H346
Suzuki, H., H641

Tabsh, K., H113
Tait, G. A., H1027
Takeshita, A., H360
Taylor, A. W., H830
Teasdale, G. M., H307
Thames, M. D., H810, H815
Thibonnier, M., H663
Thill, J. E., H328
Thomas, J. X., Jr., H410, H566
Thompson, W. L., H371
Tobian, L., H614
Toda, N., H145
Tomomatsu, E., H546
Travis, V. L., H934
Traystman, R. J., H27, H33
Tsitlik, J., H259
Twickler, J., H869

Ushioda, E., H113
Utsunomiya, T., H903

Valeri, C. R., H903
Van Brederode, J. F. M., H676
Vanhoutte, P. M., H551
Vary, T. C., H154
Vassalle, M., H767
Vatner, S. F., H94, H713
Veenstra, P. C., H379
Villarreal, D., H584
Vinten-Johansen, J., H862
Vogel, W. M., H682

Wakao, Y., H99
Walker, J. B., H911
Wallick, D. W., H523
Washburne, J. D., H505
Wasserstrom, J. A., H670
Watanabe, C. R., H884
Watkins, W. D., H471
Webb, J. G., H876
Webb, R. C., H896
Weglicki, W. B., H448
Wei, E. P., H442
Weinstein, E. M., H252
Weintraub, W. S., H852
Weisfeldt, M. L., H259, H941
Weiss, J., H318
Wenger, T. L., H340
Whiteis, C. A., H175
Whitesell, L. F., H691
Wiegman, D. L., H837
Wieling, W., H676
Wikman-Coffelt, J., H391
Willerson, J. T., H268
Wilson, D. F., H159
Wilson, G. J., H1027
Wong, P. C., H277
Woods, W. T., H41
Wright, G. L., H365

Yasuhara, K., H761
Yedavally, S., H328
Yin, F. C. P., H259, H941
Young, R. B., H1027

Zapol, W. M., H471
Zeigler, D. W., H779
Zimmerman, B. G., H277
Zimpfer, M., H713
Ziskin, M. C., H1
Zola, B., H259